

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

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Tel: (303)736-0100

TestAmerica Job ID: 280-44808-1

Client Project/Site: Adels Water Well #200383515

For:

Colorado Oil&Gas Conservation Commision

1120 Lincoln St.

Suite 801

Denver, Colorado 80203

Attn: John Axelson



Authorized for release by:

8/8/2013 2:36:56 PM

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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## Case Narrative

Client: Colorado Oil&Gas Conservation Commission  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

**Job ID: 280-44808-1**

**Laboratory: TestAmerica Denver**

**Narrative**

### CASE NARRATIVE

**Client: Colorado Oil&Gas Conservation Commission**

**Project: Adels Water Well #200383515**

**Report Number: 280-44808-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

#### **RECEIPT**

One sample and a Trip Blank were received on 07/26/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 5.0 degrees Celsius.

#### **VOLATILE ORGANIC COMPOUNDS (GC-MS)**

Samples Adels WW (280-44808-1) and Trip Blank (280-44808-2) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B.

No difficulties were encountered during the volatiles analyses.

All quality control parameters were within the acceptance limits.

#### **GAS RANGE ORGANICS**

Sample Adels WW (280-44808-1) was analyzed for gas range organics in accordance with EPA SW-846 Method 8015B - GRO.

The percent recovery for surrogate a,a,a-Trifluorotoluene failed the surrogate recovery criteria high in the Matrix Spike sample associated with batch 184816. Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed. Spike recoveries were in control and the associated LCS and LSD were in control and provide evidence that operating procedures were in control.

No other difficulties were encountered during the GRO analysis.

All other quality control parameters were within the acceptance limits.

#### **DISSOLVED GASES**

Sample Adels WW (280-44808-1) was analyzed for dissolved gases in accordance with RSK\_175.

No difficulties were encountered during the dissolved gases analysis.

All quality control parameters were within the acceptance limits.

#### **DIESEL RANGE ORGANICS**

## Case Narrative

Client: Colorado Oil&Gas Conservation Commission  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

### Job ID: 280-44808-1 (Continued)

#### Laboratory: TestAmerica Denver (Continued)

Sample Adels WW (280-44808-1) was analyzed for Diesel Range Organics in accordance with EPA SW-846 Method 8015B - DRO.

Matrix spike samples were not requested and they were not performed due to insufficient sample volume. The associated LCS and LCSD were in control and provide evidence that operating procedures were in control. No further action was required.

No other anomalies were observed. All quality control parameters were within the acceptance limits.

#### DISSOLVED METALS

Sample Adels WW (280-44808-1) was analyzed for dissolved metals in accordance with EPA SW-846 Method 6010B.

The MS and MSD spike recoveries for Boron and Manganese failed the recovery criteria low in batch 280-185154. This MS/MSD batch was performed on a sample from another client and/or job. All spike recoveries were in control. The associated LCS was in control and provides evidence that operating procedures were in control. No further action was required.

No other difficulties were encountered during the dissolved metals analysis.

All other quality control parameters were within the acceptance limits.

#### TOTAL METALS

Sample Adels WW (280-44808-1) was analyzed for total metals in accordance with EPA SW-846 Method 6010B.

Several spike recoveries were outside control limits in the MS and MSD associated with batch 280-185155. This MS/MSD batch was performed on a sample from another client and/or job. The associated LCS was in control and provides evidence that operating procedures were in control. No further action was required.

No other difficulties were encountered during the metals analysis.

All other quality control parameters were within the acceptance limits.

#### GENERAL CHEMISTRY - VARIOUS METHODS

Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

## Definitions/Glossary

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

### Qualifiers

#### GC VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

#### Metals

Qualifier	Qualifier Description
F	MS or MSD exceeds the control limits
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

#### General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

## Detection Summary

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

**Client Sample ID: Adels WW**

**Lab Sample ID: 280-44808-1**

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	45		10	ug/L	1		6010B	Total/NA
Boron	830		100	ug/L	1		6010B	Total/NA
Calcium	200000		200	ug/L	1		6010B	Total/NA
Magnesium	110000		200	ug/L	1		6010B	Total/NA
Potassium	24000		3000	ug/L	1		6010B	Total/NA
Selenium	430		15	ug/L	1		6010B	Total/NA
Sodium	300000		1000	ug/L	1		6010B	Total/NA
Strontium	4300		10	ug/L	1		6010B	Total/NA
Barium	34		10	ug/L	1		6010B	Dissolved
Boron	660		100	ug/L	1		6010B	Dissolved
Calcium	150000		200	ug/L	1		6010B	Dissolved
Magnesium	82000		200	ug/L	1		6010B	Dissolved
Potassium	19000		3000	ug/L	1		6010B	Dissolved
Selenium	330		15	ug/L	1		6010B	Dissolved
Sodium	230000		1000	ug/L	1		6010B	Dissolved
Strontium	3300		10	ug/L	1		6010B	Dissolved
Bromide	1.3		0.20	mg/L	1		300.0	Total/NA
Nitrate as N	22		5.0	mg/L	10		300.0	Total/NA
Chloride	260		30	mg/L	10		300.0	Total/NA
Fluoride	0.71		0.50	mg/L	1		300.0	Total/NA
Sulfate	900		100	mg/L	20		300.0	Total/NA
Nitrate Nitrite as N	24		1.0	mg/L	10		353.2	Total/NA
Total Alkalinity	240		5.0	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	240		5.0	mg/L	1		SM 2320B	Total/NA
Specific Conductance	2800		2.0	umhos/cm	1		SM 2510B	Total/NA
Total Dissolved Solids	2100		20	mg/L	1		SM 2540C	Total/NA
pH	7.48	HF	0.100	SU	1		SM 4500 H+ B	Total/NA

**Client Sample ID: Trip Blank**

**Lab Sample ID: 280-44808-2**

No Detections.

This Detection Summary does not include radiochemical test results.

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## Method Summary

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8015B	Gasoline Range Organics - (GC)	SW846	TAL DEN
RSK-175	Dissolved Gases in Water	RSK	TAL DEN
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL DEN
6010B	Metals (ICP)	SW846	TAL DEN
300.0	Anions, Ion Chromatography	MCAWW	TAL DEN
300.0	Orthophosphate	MCAWW	TAL DEN
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
SM 2510B	Conductivity, Specific Conductance	SM	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 4500 H+ B	pH	SM	TAL DEN

### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique , RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

## Sample Summary

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-44808-1	Adels WW	Water	07/25/13 10:10	07/26/13 09:00
280-44808-2	Trip Blank	Water	07/23/13 00:00	07/26/13 09:00



# Client Sample Results

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: Adels WW  
Date Collected: 07/25/13 10:10  
Date Received: 07/26/13 09:00

Lab Sample ID: 280-44808-1  
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			08/02/13 12:22	1
Ethylbenzene	ND		1.0	ug/L			08/02/13 12:22	1
Toluene	ND		1.0	ug/L			08/02/13 12:22	1
m-Xylene & p-Xylene	ND		2.0	ug/L			08/02/13 12:22	1
o-Xylene	ND		1.0	ug/L			08/02/13 12:22	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		70 - 127				08/02/13 12:22	1
Toluene-d8 (Surr)	110		80 - 125				08/02/13 12:22	1
4-Bromofluorobenzene (Surr)	112		78 - 120				08/02/13 12:22	1
Dibromofluoromethane (Surr)	101		77 - 120				08/02/13 12:22	1

Client Sample ID: Trip Blank  
Date Collected: 07/23/13 00:00  
Date Received: 07/26/13 09:00

Lab Sample ID: 280-44808-2  
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			07/30/13 14:41	1
Ethylbenzene	ND		1.0	ug/L			07/30/13 14:41	1
Toluene	ND		1.0	ug/L			07/30/13 14:41	1
m-Xylene & p-Xylene	ND		2.0	ug/L			07/30/13 14:41	1
o-Xylene	ND		1.0	ug/L			07/30/13 14:41	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		70 - 127				07/30/13 14:41	1
Toluene-d8 (Surr)	92		80 - 125				07/30/13 14:41	1
4-Bromofluorobenzene (Surr)	89		78 - 120				07/30/13 14:41	1
Dibromofluoromethane (Surr)	109		77 - 120				07/30/13 14:41	1

## Method: 8015B - Gasoline Range Organics - (GC)

Client Sample ID: Adels WW  
Date Collected: 07/25/13 10:10  
Date Received: 07/26/13 09:00

Lab Sample ID: 280-44808-1  
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	ug/L			07/29/13 20:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	90		82 - 110				07/29/13 20:12	1

## Method: RSK-175 - Dissolved Gases in Water

Client Sample ID: Adels WW  
Date Collected: 07/25/13 10:10  
Date Received: 07/26/13 09:00

Lab Sample ID: 280-44808-1  
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		5.0	ug/L			07/31/13 09:47	1

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# Client Sample Results

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Client Sample ID: Adels WW  
Date Collected: 07/25/13 10:10  
Date Received: 07/26/13 09:00

Lab Sample ID: 280-44808-1  
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.24	mg/L		07/26/13 19:15	08/01/13 08:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	76		50 - 115			07/26/13 19:15	08/01/13 08:26	1

## Method: 6010B - Metals (ICP)

Client Sample ID: Adels WW  
Date Collected: 07/25/13 10:10  
Date Received: 07/26/13 09:00

Lab Sample ID: 280-44808-1  
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	45		10	ug/L		07/30/13 12:00	07/30/13 22:38	1
Boron	830		100	ug/L		07/30/13 12:00	07/30/13 22:38	1
Calcium	200000		200	ug/L		07/30/13 12:00	07/30/13 22:38	1
Iron	ND		100	ug/L		07/30/13 12:00	07/30/13 22:38	1
Magnesium	110000		200	ug/L		07/30/13 12:00	07/30/13 22:38	1
Manganese	ND		10	ug/L		07/30/13 12:00	07/30/13 22:38	1
Potassium	24000		3000	ug/L		07/30/13 12:00	07/30/13 22:38	1
Selenium	430		15	ug/L		07/30/13 12:00	07/30/13 22:38	1
Sodium	300000		1000	ug/L		07/30/13 12:00	07/30/13 22:38	1
Strontium	4300		10	ug/L		07/30/13 12:00	07/30/13 22:38	1

## Method: 6010B - Metals (ICP) - Dissolved

Client Sample ID: Adels WW  
Date Collected: 07/25/13 10:10  
Date Received: 07/26/13 09:00

Lab Sample ID: 280-44808-1  
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	34		10	ug/L		07/30/13 07:30	07/30/13 15:32	1
Boron	660		100	ug/L		07/30/13 07:30	07/30/13 15:32	1
Calcium	150000		200	ug/L		07/30/13 07:30	07/30/13 15:32	1
Iron	ND		100	ug/L		07/30/13 07:30	07/30/13 15:32	1
Magnesium	82000		200	ug/L		07/30/13 07:30	07/30/13 15:32	1
Manganese	ND		10	ug/L		07/30/13 07:30	07/30/13 15:32	1
Potassium	19000		3000	ug/L		07/30/13 07:30	07/30/13 15:32	1
Selenium	330		15	ug/L		07/30/13 07:30	07/30/13 15:32	1
Sodium	230000		1000	ug/L		07/30/13 07:30	07/30/13 15:32	1
Strontium	3300		10	ug/L		07/30/13 07:30	07/30/13 15:32	1

## General Chemistry

Client Sample ID: Adels WW  
Date Collected: 07/25/13 10:10  
Date Received: 07/26/13 09:00

Lab Sample ID: 280-44808-1  
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	1.3		0.20	mg/L			07/26/13 18:48	1
Nitrate as N	22		5.0	mg/L			07/27/13 01:24	10
Chloride	260		30	mg/L			07/27/13 01:24	10
Nitrite as N	ND		0.50	mg/L			07/26/13 18:48	1
Fluoride	0.71		0.50	mg/L			07/26/13 18:48	1

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## Client Sample Results

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

### General Chemistry (Continued)

**Client Sample ID: Adels WW**  
**Date Collected: 07/25/13 10:10**  
**Date Received: 07/26/13 09:00**

**Lab Sample ID: 280-44808-1**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	ND		0.50	mg/L			07/26/13 18:48	1
<b>Sulfate</b>	<b>900</b>		100	mg/L			07/27/13 01:40	20
<b>Nitrate Nitrite as N</b>	<b>24</b>		1.0	mg/L			07/29/13 15:14	10
<b>Total Alkalinity</b>	<b>240</b>		5.0	mg/L			08/05/13 12:39	1
<b>Bicarbonate Alkalinity as CaCO3</b>	<b>240</b>		5.0	mg/L			08/05/13 12:39	1
Carbonate Alkalinity as CaCO3	ND		5.0	mg/L			08/05/13 12:39	1
Hydroxide Alkalinity	ND		5.0	mg/L			08/05/13 12:39	1
<b>Specific Conductance</b>	<b>2800</b>		2.0	umhos/cm			07/31/13 11:55	1
<b>Total Dissolved Solids</b>	<b>2100</b>		20	mg/L			07/30/13 14:17	1
<b>pH</b>	<b>7.48</b>	<b>HF</b>	0.100	SU			07/26/13 14:34	1

## QC Association Summary

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

### GC/MS VOA

#### Analysis Batch: 184927

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-44684-D-1 MS	Matrix Spike	Total/NA	Water	8260B	
280-44684-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
280-44808-2	Trip Blank	Total/NA	Water	8260B	
LCS 280-184927/4	Lab Control Sample	Total/NA	Water	8260B	
MB 280-184927/5	Method Blank	Total/NA	Water	8260B	

#### Analysis Batch: 185521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-44808-1	Adels WW	Total/NA	Water	8260B	
280-44910-E-11 MS	Matrix Spike	Total/NA	Water	8260B	
280-44910-E-11 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
LCS 280-185521/4	Lab Control Sample	Total/NA	Water	8260B	
MB 280-185521/5	Method Blank	Total/NA	Water	8260B	

### GC VOA

#### Analysis Batch: 184816

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-44737-Z-13 MS	Matrix Spike	Total/NA	Water	8015B	
280-44737-Z-13 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	
280-44808-1	Adels WW	Total/NA	Water	8015B	
LCS 280-184816/6	Lab Control Sample	Total/NA	Water	8015B	
LCSD 280-184816/7	Lab Control Sample Dup	Total/NA	Water	8015B	
MB 280-184816/5	Method Blank	Total/NA	Water	8015B	

#### Analysis Batch: 185162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-44808-1	Adels WW	Total/NA	Water	RSK-175	
280-44802-AB-1 MS	Matrix Spike	Total/NA	Water	RSK-175	
280-44802-AB-1 MSD	Matrix Spike Duplicate	Total/NA	Water	RSK-175	
280-44802-AE-1 DU	Duplicate	Total/NA	Water	RSK-175	
LCS 280-185162/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 280-185162/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 280-185162/6	Method Blank	Total/NA	Water	RSK-175	

### GC Semi VOA

#### Prep Batch: 184630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-44808-1	Adels WW	Total/NA	Water	3510C	
LCS 280-184630/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-184630/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 280-184630/1-A	Method Blank	Total/NA	Water	3510C	

#### Analysis Batch: 185160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-44808-1	Adels WW	Total/NA	Water	8015B	184630
LCS 280-184630/2-A	Lab Control Sample	Total/NA	Water	8015B	184630
LCSD 280-184630/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	184630
MB 280-184630/1-A	Method Blank	Total/NA	Water	8015B	184630

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# QC Association Summary

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

## Metals

### Filtration Batch: 184634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-44808-1	Adels WW	Dissolved	Water	FILTRATION	

### Filtration Batch: 184635

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-44803-F-1-D MS	Matrix Spike	Dissolved	Water	FILTRATION	
280-44803-F-1-E MSD	Matrix Spike Duplicate	Dissolved	Water	FILTRATION	
LCS 280-184635/2-B	Lab Control Sample	Dissolved	Water	FILTRATION	
MB 280-184635/1-B	Method Blank	Dissolved	Water	FILTRATION	

### Prep Batch: 184687

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-44803-F-1-D MS	Matrix Spike	Dissolved	Water	3005A	184635
280-44803-F-1-E MSD	Matrix Spike Duplicate	Dissolved	Water	3005A	184635
280-44808-1	Adels WW	Dissolved	Water	3005A	184634
LCS 280-184635/2-B	Lab Control Sample	Dissolved	Water	3005A	184635
MB 280-184635/1-B	Method Blank	Dissolved	Water	3005A	184635

### Prep Batch: 184858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-44808-1	Adels WW	Total/NA	Water	3010A	
280-44831-A-6-B MS	Matrix Spike	Total/NA	Water	3010A	
280-44831-A-6-C MSD	Matrix Spike Duplicate	Total/NA	Water	3010A	
LCS 280-184858/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 280-184858/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	
MB 280-184858/1-A	Method Blank	Total/NA	Water	3010A	

### Analysis Batch: 185154

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-44803-F-1-D MS	Matrix Spike	Dissolved	Water	6010B	184687
280-44803-F-1-E MSD	Matrix Spike Duplicate	Dissolved	Water	6010B	184687
280-44808-1	Adels WW	Dissolved	Water	6010B	184687
LCS 280-184635/2-B	Lab Control Sample	Dissolved	Water	6010B	184687
MB 280-184635/1-B	Method Blank	Dissolved	Water	6010B	184687

### Analysis Batch: 185155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-44808-1	Adels WW	Total/NA	Water	6010B	184858
280-44831-A-6-B MS	Matrix Spike	Total/NA	Water	6010B	184858
280-44831-A-6-C MSD	Matrix Spike Duplicate	Total/NA	Water	6010B	184858
LCS 280-184858/2-A	Lab Control Sample	Total/NA	Water	6010B	184858
LCSD 280-184858/3-A	Lab Control Sample Dup	Total/NA	Water	6010B	184858
MB 280-184858/1-A	Method Blank	Total/NA	Water	6010B	184858

## General Chemistry

### Analysis Batch: 184599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-44804-C-1 DU	Duplicate	Total/NA	Water	SM 4500 H+ B	
280-44808-1	Adels WW	Total/NA	Water	SM 4500 H+ B	
LCS 280-184599/4	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

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## QC Association Summary

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

### General Chemistry (Continued)

#### Analysis Batch: 184599 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 280-184599/5	Lab Control Sample Dup	Total/NA	Water	SM 4500 H+ B	

#### Analysis Batch: 184763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-44808-1	Adels WW	Total/NA	Water	300.0	
280-44808-1	Adels WW	Total/NA	Water	300.0	
280-44808-1	Adels WW	Total/NA	Water	300.0	
280-44811-A-8 DU	Duplicate	Total/NA	Water	300.0	
280-44811-A-8 MS	Matrix Spike	Total/NA	Water	300.0	
280-44811-A-8 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 280-184763/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 280-184763/5	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 280-184763/6	Method Blank	Total/NA	Water	300.0	
MRL 280-184763/3 MRL	Lab Control Sample	Total/NA	Water	300.0	

#### Analysis Batch: 184764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-44808-1	Adels WW	Total/NA	Water	300.0	
280-44808-1	Adels WW	Total/NA	Water	300.0	
280-44811-A-8 DU	Duplicate	Total/NA	Water	300.0	
280-44811-A-8 MS	Matrix Spike	Total/NA	Water	300.0	
280-44811-A-8 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 280-184764/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 280-184764/5	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 280-184764/6	Method Blank	Total/NA	Water	300.0	
MRL 280-184764/3 MRL	Lab Control Sample	Total/NA	Water	300.0	

#### Analysis Batch: 184833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-44808-1	Adels WW	Total/NA	Water	353.2	
280-44835-B-7 MS	Matrix Spike	Total/NA	Water	353.2	
280-44835-B-7 MSD	Matrix Spike Duplicate	Total/NA	Water	353.2	
LCS 280-184833/94	Lab Control Sample	Total/NA	Water	353.2	
LCSD 280-184833/95	Lab Control Sample Dup	Total/NA	Water	353.2	
MB 280-184833/93	Method Blank	Total/NA	Water	353.2	
MRL 280-184833/52 MRL	Lab Control Sample	Total/NA	Water	353.2	

#### Analysis Batch: 185047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-44808-1	Adels WW	Total/NA	Water	SM 2540C	
280-44811-A-2 DU	Duplicate	Total/NA	Water	SM 2540C	
LCS 280-185047/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 280-185047/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
MB 280-185047/1	Method Blank	Total/NA	Water	SM 2540C	

#### Analysis Batch: 185227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-44808-1	Adels WW	Total/NA	Water	SM 2510B	
280-44830-C-1 DU	Duplicate	Total/NA	Water	SM 2510B	
LCS 280-185227/3	Lab Control Sample	Total/NA	Water	SM 2510B	
LCSD 280-185227/4	Lab Control Sample Dup	Total/NA	Water	SM 2510B	

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## QC Association Summary

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

### General Chemistry (Continued)

#### Analysis Batch: 185227 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-185227/5	Method Blank	Total/NA	Water	SM 2510B	

#### Analysis Batch: 185883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-44789-B-1 DU	Duplicate	Total/NA	Water	SM 2320B	
280-44808-1	Adels WW	Total/NA	Water	SM 2320B	
LCS 280-185883/4	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 280-185883/5	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
MB 280-185883/6	Method Blank	Total/NA	Water	SM 2320B	

# QC Sample Results

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-184927/5

Matrix: Water

Analysis Batch: 184927

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			07/30/13 09:47	1
Ethylbenzene	ND		1.0	ug/L			07/30/13 09:47	1
Toluene	ND		1.0	ug/L			07/30/13 09:47	1
m-Xylene & p-Xylene	ND		2.0	ug/L			07/30/13 09:47	1
o-Xylene	ND		1.0	ug/L			07/30/13 09:47	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		70 - 127		07/30/13 09:47	1
Toluene-d8 (Surr)	94		80 - 125		07/30/13 09:47	1
4-Bromofluorobenzene (Surr)	90		78 - 120		07/30/13 09:47	1
Dibromofluoromethane (Surr)	107		77 - 120		07/30/13 09:47	1

Lab Sample ID: LCS 280-184927/4

Matrix: Water

Analysis Batch: 184927

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	5.00	5.15		ug/L		103	74 - 135
Ethylbenzene	5.00	5.00		ug/L		100	72 - 120
Toluene	5.00	5.39		ug/L		108	73 - 120
m-Xylene & p-Xylene	5.00	5.00		ug/L		100	74 - 135
o-Xylene	5.00	5.03		ug/L		101	73 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		70 - 127
Toluene-d8 (Surr)	93		80 - 125
4-Bromofluorobenzene (Surr)	88		78 - 120
Dibromofluoromethane (Surr)	104		77 - 120

Lab Sample ID: 280-44684-D-1 MS

Matrix: Water

Analysis Batch: 184927

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		2000	2410		ug/L		102	74 - 135
Ethylbenzene	ND		2000	2080		ug/L		104	72 - 120
Toluene	ND		2000	2280		ug/L		107	73 - 120
m-Xylene & p-Xylene	ND		2000	2160		ug/L		108	74 - 135
o-Xylene	ND		2000	2090		ug/L		105	73 - 135

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		70 - 127
Toluene-d8 (Surr)	94		80 - 125
4-Bromofluorobenzene (Surr)	89		78 - 120
Dibromofluoromethane (Surr)	104		77 - 120

TestAmerica Denver



# QC Sample Results

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-44684-D-1 MSD

Matrix: Water

Analysis Batch: 184927

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		2000	2440		ug/L		103	74 - 135	1	20
Ethylbenzene	ND		2000	2070		ug/L		103	72 - 120	1	26
Toluene	ND		2000	2350		ug/L		110	73 - 120	3	20
m-Xylene & p-Xylene	ND		2000	2170		ug/L		109	74 - 135	0	20
o-Xylene	ND		2000	2080		ug/L		104	73 - 135	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		70 - 127
Toluene-d8 (Surr)	91		80 - 125
4-Bromofluorobenzene (Surr)	88		78 - 120
Dibromofluoromethane (Surr)	105		77 - 120

Lab Sample ID: MB 280-185521/5

Matrix: Water

Analysis Batch: 185521

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			08/02/13 09:02	1
Ethylbenzene	ND		1.0	ug/L			08/02/13 09:02	1
Toluene	ND		1.0	ug/L			08/02/13 09:02	1
m-Xylene & p-Xylene	ND		2.0	ug/L			08/02/13 09:02	1
o-Xylene	ND		1.0	ug/L			08/02/13 09:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 127		08/02/13 09:02	1
Toluene-d8 (Surr)	109		80 - 125		08/02/13 09:02	1
4-Bromofluorobenzene (Surr)	112		78 - 120		08/02/13 09:02	1
Dibromofluoromethane (Surr)	98		77 - 120		08/02/13 09:02	1

Lab Sample ID: LCS 280-185521/4

Matrix: Water

Analysis Batch: 185521

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	5.00	5.15		ug/L		103	74 - 135
Ethylbenzene	5.00	5.18		ug/L		104	72 - 120
Toluene	5.00	5.09		ug/L		102	73 - 120
m-Xylene & p-Xylene	5.00	5.31		ug/L		106	74 - 135
o-Xylene	5.00	5.18		ug/L		104	73 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	109		70 - 127
Toluene-d8 (Surr)	118		80 - 125
4-Bromofluorobenzene (Surr)	113		78 - 120
Dibromofluoromethane (Surr)	100		77 - 120

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# QC Sample Results

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-44910-E-11 MS

Matrix: Water

Analysis Batch: 185521

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		20.0	20.4		ug/L		94	74 - 135
Ethylbenzene	ND		20.0	18.2		ug/L		91	72 - 120
Toluene	ND		20.0	18.8		ug/L		94	73 - 120
m-Xylene & p-Xylene	ND		20.0	18.3		ug/L		91	74 - 135
o-Xylene	ND		20.0	18.6		ug/L		93	73 - 135

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		70 - 127
Toluene-d8 (Surr)	101		80 - 125
4-Bromofluorobenzene (Surr)	105		78 - 120
Dibromofluoromethane (Surr)	93		77 - 120

Lab Sample ID: 280-44910-E-11 MSD

Matrix: Water

Analysis Batch: 185521

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		20.0	20.4		ug/L		94	74 - 135	0	20
Ethylbenzene	ND		20.0	18.0		ug/L		90	72 - 120	1	26
Toluene	ND		20.0	18.9		ug/L		94	73 - 120	0	20
m-Xylene & p-Xylene	ND		20.0	18.3		ug/L		91	74 - 135	0	20
o-Xylene	ND		20.0	18.8		ug/L		94	73 - 135	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	104		70 - 127
Toluene-d8 (Surr)	101		80 - 125
4-Bromofluorobenzene (Surr)	105		78 - 120
Dibromofluoromethane (Surr)	99		77 - 120

## Method: 8015B - Gasoline Range Organics - (GC)

Lab Sample ID: MB 280-184816/5

Matrix: Water

Analysis Batch: 184816

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	ug/L			07/29/13 10:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	97		82 - 110		07/29/13 10:50	1

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# QC Sample Results

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

## Method: 8015B - Gasoline Range Organics - (GC) (Continued)

Lab Sample ID: LCS 280-184816/6

Matrix: Water

Analysis Batch: 184816

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)			101	103		ug/L		103	79 - 149		
-C6-C10											
Surrogate		LCS %Recovery	LCS Qualifier	Limits							
a,a,a-Trifluorotoluene		99		82 - 110							

Lab Sample ID: LCSD 280-184816/7

Matrix: Water

Analysis Batch: 184816

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)			101	98.6		ug/L		98	79 - 149	5	27
-C6-C10											
Surrogate		LCSD %Recovery	LCSD Qualifier	Limits							
a,a,a-Trifluorotoluene		99		82 - 110							

Lab Sample ID: 280-44737-Z-13 MS

Matrix: Water

Analysis Batch: 184816

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)	4100		1010	5130	4	ug/L		98	79 - 149		
-C6-C10											
Surrogate		MS %Recovery	MS Qualifier	Limits							
a,a,a-Trifluorotoluene		118	X	82 - 110							

Lab Sample ID: 280-44737-Z-13 MSD

Matrix: Water

Analysis Batch: 184816

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)	4100		1010	5170	4	ug/L		102	79 - 149	1	27
-C6-C10											
Surrogate		MSD %Recovery	MSD Qualifier	Limits							
a,a,a-Trifluorotoluene		107		82 - 110							

## Method: RSK-175 - Dissolved Gases in Water

Lab Sample ID: MB 280-185162/6

Matrix: Water

Analysis Batch: 185162

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		5.0	ug/L			07/31/13 08:55	1

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# QC Sample Results

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

## Method: RSK-175 - Dissolved Gases in Water (Continued)

Lab Sample ID: LCS 280-185162/4

Matrix: Water

Analysis Batch: 185162

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	146	144		ug/L		98	75 - 125

Lab Sample ID: LCSD 280-185162/5

Matrix: Water

Analysis Batch: 185162

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane	146	140		ug/L		96	75 - 125	3	20

Lab Sample ID: 280-44802-AB-1 MS

Matrix: Water

Analysis Batch: 185162

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	ND		146	95.5		ug/L		65	52 - 145

Lab Sample ID: 280-44802-AB-1 MSD

Matrix: Water

Analysis Batch: 185162

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane	ND		146	103		ug/L		70	52 - 145	7	20

Lab Sample ID: 280-44802-AE-1 DU

Matrix: Water

Analysis Batch: 185162

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Methane	ND		ND		ug/L		NC	20

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 280-184630/1-A

Matrix: Water

Analysis Batch: 185160

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 184630

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.25	mg/L		07/26/13 19:15	07/31/13 21:08	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	75		50 - 115	07/26/13 19:15	07/31/13 21:08	1

Lab Sample ID: LCS 280-184630/2-A

Matrix: Water

Analysis Batch: 185160

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 184630

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	2.00	1.73		mg/L		86	54 - 115

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# QC Sample Results

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

## Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 280-184630/2-A

Matrix: Water

Analysis Batch: 185160

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 184630

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	80		50 - 115

Lab Sample ID: LCSD 280-184630/3-A

Matrix: Water

Analysis Batch: 185160

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 184630

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	2.00	1.77		mg/L		88	54 - 115	2	31

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	78		50 - 115

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 280-184858/1-A

Matrix: Water

Analysis Batch: 185155

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 184858

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	ND		10	ug/L		07/30/13 12:00	07/30/13 21:33	1
Boron	ND		100	ug/L		07/30/13 12:00	07/30/13 21:33	1
Calcium	ND		200	ug/L		07/30/13 12:00	07/30/13 21:33	1
Iron	ND		100	ug/L		07/30/13 12:00	07/30/13 21:33	1
Magnesium	ND		200	ug/L		07/30/13 12:00	07/30/13 21:33	1
Manganese	ND		10	ug/L		07/30/13 12:00	07/30/13 21:33	1
Potassium	ND		3000	ug/L		07/30/13 12:00	07/30/13 21:33	1
Selenium	ND		15	ug/L		07/30/13 12:00	07/30/13 21:33	1
Sodium	ND		1000	ug/L		07/30/13 12:00	07/30/13 21:33	1
Strontium	ND		10	ug/L		07/30/13 12:00	07/30/13 21:33	1

Lab Sample ID: LCS 280-184858/2-A

Matrix: Water

Analysis Batch: 185155

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 184858

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	2000	2090		ug/L		105	90 - 112
Boron	1000	1040		ug/L		104	86 - 110
Calcium	50000	51700		ug/L		103	90 - 111
Iron	1000	1040		ug/L		104	89 - 115
Magnesium	50000	51700		ug/L		103	90 - 113
Manganese	500	515		ug/L		103	90 - 110
Potassium	50000	52400		ug/L		105	89 - 114
Selenium	2000	2040		ug/L		102	85 - 112
Sodium	50000	51700		ug/L		103	90 - 115
Strontium	1000	1040		ug/L		104	90 - 111

TestAmerica Denver

# QC Sample Results

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

## Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCSD 280-184858/3-A

Matrix: Water

Analysis Batch: 185155

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 184858

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Barium	2000	2090		ug/L		105	90 - 112	0	20
Boron	1000	1040		ug/L		104	86 - 110	0	20
Calcium	50000	51800		ug/L		104	90 - 111	0	20
Iron	1000	1050		ug/L		105	89 - 115	1	20
Magnesium	50000	52100		ug/L		104	90 - 113	1	20
Manganese	500	517		ug/L		103	90 - 110	0	20
Potassium	50000	52700		ug/L		105	89 - 114	1	20
Selenium	2000	2030		ug/L		102	85 - 112	0	20
Sodium	50000	51600		ug/L		103	90 - 115	0	20
Strontium	1000	1040		ug/L		104	90 - 111	0	20

Lab Sample ID: 280-44831-A-6-B MS

Matrix: Water

Analysis Batch: 185155

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 184858

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	500		2000	2480		ug/L		99	85 - 120
Boron	410		1000	1360		ug/L		95	87 - 113
Calcium	140000		50000	186000		ug/L		97	48 - 153
Iron	64000		1000	70700	4	ug/L		702	52 - 155
Magnesium	31000		50000	80500		ug/L		100	62 - 146
Manganese	4300		500	4780	4	ug/L		91	79 - 121
Potassium	12000		50000	62400		ug/L		102	76 - 132
Selenium	ND		2000	1800		ug/L		90	71 - 140
Sodium	120000		50000	169000		ug/L		99	70 - 203
Strontium	1000		1000	2010		ug/L		99	81 - 125

Lab Sample ID: 280-44831-A-6-C MSD

Matrix: Water

Analysis Batch: 185155

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 184858

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Barium	500		2000	2550		ug/L		103	85 - 120	3	20
Boron	410		1000	1390		ug/L		98	87 - 113	2	20
Calcium	140000		50000	191000		ug/L		106	48 - 153	3	20
Iron	64000		1000	73000	4	ug/L		936	52 - 155	3	20
Magnesium	31000		50000	82800		ug/L		105	62 - 146	3	20
Manganese	4300		500	4980	4	ug/L		132	79 - 121	4	20
Potassium	12000		50000	64300		ug/L		106	76 - 132	3	20
Selenium	ND		2000	1840		ug/L		92	71 - 140	2	20
Sodium	120000		50000	173000		ug/L		108	70 - 203	3	20
Strontium	1000		1000	2070		ug/L		105	81 - 125	3	20

Lab Sample ID: MB 280-184635/1-B

Matrix: Water

Analysis Batch: 185154

Client Sample ID: Method Blank

Prep Type: Dissolved

Prep Batch: 184687

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	ND		10	ug/L		07/30/13 07:30	07/30/13 14:51	1

TestAmerica Denver

# QC Sample Results

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

## Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: MB 280-184635/1-B

Matrix: Water

Analysis Batch: 185154

Client Sample ID: Method Blank

Prep Type: Dissolved

Prep Batch: 184687

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	ug/L		07/30/13 07:30	07/30/13 14:51	1
Calcium	ND		200	ug/L		07/30/13 07:30	07/30/13 14:51	1
Iron	ND		100	ug/L		07/30/13 07:30	07/30/13 14:51	1
Magnesium	ND		200	ug/L		07/30/13 07:30	07/30/13 14:51	1
Manganese	ND		10	ug/L		07/30/13 07:30	07/30/13 14:51	1
Potassium	ND		3000	ug/L		07/30/13 07:30	07/30/13 14:51	1
Selenium	ND		15	ug/L		07/30/13 07:30	07/30/13 14:51	1
Sodium	ND		1000	ug/L		07/30/13 07:30	07/30/13 14:51	1
Strontium	ND		10	ug/L		07/30/13 07:30	07/30/13 14:51	1

Lab Sample ID: LCS 280-184635/2-B

Matrix: Water

Analysis Batch: 185154

Client Sample ID: Lab Control Sample

Prep Type: Dissolved

Prep Batch: 184687

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	2000	2070		ug/L		103	90 - 112
Boron	1000	876		ug/L		88	86 - 110
Calcium	50000	51200		ug/L		102	90 - 111
Iron	1000	893		ug/L		89	89 - 115
Magnesium	50000	52200		ug/L		104	90 - 113
Manganese	500	512		ug/L		102	90 - 110
Potassium	50000	52500		ug/L		105	89 - 114
Selenium	2000	2090		ug/L		104	85 - 112
Sodium	50000	51800		ug/L		104	90 - 115
Strontium	1000	1030		ug/L		103	90 - 111

Lab Sample ID: 280-44803-F-1-D MS

Matrix: Water

Analysis Batch: 185154

Client Sample ID: Matrix Spike

Prep Type: Dissolved

Prep Batch: 184687

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	130		2000	1960		ug/L		91	85 - 120
Boron	1500		1000	2320	F	ug/L		86	87 - 113
Calcium	170000		50000	208000		ug/L		75	48 - 153
Iron	ND		1000	918		ug/L		87	52 - 155
Magnesium	35000		50000	79100		ug/L		88	62 - 146
Manganese	1800		500	2180	F	ug/L		75	79 - 121
Potassium	22000		50000	67200		ug/L		91	76 - 132
Selenium	ND		2000	1850		ug/L		92	71 - 140
Sodium	43000		50000	87100		ug/L		88	70 - 203
Strontium	2000		1000	2860		ug/L		83	81 - 125

Lab Sample ID: 280-44803-F-1-E MSD

Matrix: Water

Analysis Batch: 185154

Client Sample ID: Matrix Spike Duplicate

Prep Type: Dissolved

Prep Batch: 184687

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Barium	130		2000	1960		ug/L		91	85 - 120	0	20
Boron	1500		1000	2310	F	ug/L		85	87 - 113	0	20

TestAmerica Denver

# QC Sample Results

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

## Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 280-44803-F-1-E MSD

Matrix: Water

Analysis Batch: 185154

Client Sample ID: Matrix Spike Duplicate

Prep Type: Dissolved

Prep Batch: 184687

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	170000		50000	207000		ug/L		72	48 - 153	1	20
Iron	ND		1000	911		ug/L		87	52 - 155	1	20
Magnesium	35000		50000	78700		ug/L		87	62 - 146	0	20
Manganese	1800		500	2170	F	ug/L		73	79 - 121	1	20
Potassium	22000		50000	67100		ug/L		91	76 - 132	0	20
Selenium	ND		2000	1840		ug/L		92	71 - 140	0	20
Sodium	43000		50000	86500		ug/L		87	70 - 203	1	20
Strontium	2000		1000	2850		ug/L		82	81 - 125	0	20

## Method: 300.0 - Orthophosphate

Lab Sample ID: MB 280-184764/6

Matrix: Water

Analysis Batch: 184764

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.50	mg/L			07/26/13 11:59	1
Nitrite as N	ND		0.50	mg/L			07/26/13 11:59	1
Orthophosphate as P	ND		0.50	mg/L			07/26/13 11:59	1

Lab Sample ID: LCS 280-184764/4

Matrix: Water

Analysis Batch: 184764

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	4.91		mg/L		98	90 - 110
Nitrite as N	5.00	4.96		mg/L		99	90 - 110
Orthophosphate as P	5.00	5.05		mg/L		101	90 - 110

Lab Sample ID: LCSD 280-184764/5

Matrix: Water

Analysis Batch: 184764

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	5.00	5.04		mg/L		101	90 - 110	2	10
Nitrite as N	5.00	5.09		mg/L		102	90 - 110	3	10
Orthophosphate as P	5.00	5.00		mg/L		100	90 - 110	1	10

Lab Sample ID: MRL 280-184764/3 MRL

Matrix: Water

Analysis Batch: 184764

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.200	ND		mg/L		104	50 - 150
Nitrite as N	0.200	ND		mg/L		102	50 - 150
Orthophosphate as P	0.200	ND		mg/L		78	50 - 150

TestAmerica Denver



## QC Sample Results

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

### Method: 300.0 - Orthophosphate (Continued)

Lab Sample ID: 280-44811-A-8 MS

Matrix: Water

Analysis Batch: 184764

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.2		5.00	6.58		mg/L		107	80 - 120
Nitrite as N	ND		5.00	5.40		mg/L		106	80 - 120
Orthophosphate as P	ND		5.00	5.05		mg/L		101	80 - 120

Lab Sample ID: 280-44811-A-8 MSD

Matrix: Water

Analysis Batch: 184764

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	1.2		5.00	6.51		mg/L		106	80 - 120	1	20
Nitrite as N	ND		5.00	5.37		mg/L		106	80 - 120	1	20
Orthophosphate as P	ND		5.00	5.25		mg/L		105	80 - 120	4	20

Lab Sample ID: 280-44811-A-8 DU

Matrix: Water

Analysis Batch: 184764

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	1.2		1.21		mg/L		0.6	15
Nitrite as N	ND		ND		mg/L		NC	15
Orthophosphate as P	ND		ND		mg/L		NC	15

### Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 280-184763/6

Matrix: Water

Analysis Batch: 184763

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.20	mg/L			07/26/13 11:59	1
Chloride	ND		3.0	mg/L			07/26/13 11:59	1
Fluoride	ND		0.50	mg/L			07/26/13 11:59	1
Sulfate	ND		5.0	mg/L			07/26/13 11:59	1

Lab Sample ID: LCS 280-184763/4

Matrix: Water

Analysis Batch: 184763

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	5.00	4.73		mg/L		95	90 - 110
Chloride	25.0	25.1		mg/L		101	90 - 110
Fluoride	5.00	5.24		mg/L		105	90 - 110
Sulfate	25.0	25.3		mg/L		101	90 - 110

TestAmerica Denver

# QC Sample Results

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 280-184763/5

Matrix: Water

Analysis Batch: 184763

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromide	5.00	4.86		mg/L		97	90 - 110	3	10
Chloride	25.0	25.8		mg/L		103	90 - 110	2	10
Fluoride	5.00	5.25		mg/L		105	90 - 110	0	10
Sulfate	25.0	25.4		mg/L		102	90 - 110	0	10

Lab Sample ID: MRL 280-184763/3 MRL

Matrix: Water

Analysis Batch: 184763

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromide	0.200	0.237		mg/L		119	50 - 150		
Chloride	1.00	ND		mg/L		106	50 - 150		
Fluoride	0.200	ND		mg/L		100	50 - 150		
Sulfate	1.00	ND		mg/L		109	50 - 150		

Lab Sample ID: 280-44811-A-8 MS

Matrix: Water

Analysis Batch: 184763

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromide	ND		5.00	5.20		mg/L		104	80 - 120		
Chloride	5.3		25.0	32.3		mg/L		108	80 - 120		
Fluoride	ND		5.00	4.87		mg/L		96	80 - 120		
Sulfate	8.4		25.0	35.6		mg/L		109	80 - 120		

Lab Sample ID: 280-44811-A-8 MSD

Matrix: Water

Analysis Batch: 184763

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromide	ND		5.00	5.15		mg/L		103	80 - 120	1	20
Chloride	5.3		25.0	32.0		mg/L		107	80 - 120	1	20
Fluoride	ND		5.00	4.83		mg/L		95	80 - 120	1	20
Sulfate	8.4		25.0	36.1		mg/L		111	80 - 120	1	20

Lab Sample ID: 280-44811-A-8 DU

Matrix: Water

Analysis Batch: 184763

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromide	ND		ND		mg/L				NC	15
Chloride	5.3		5.28		mg/L				0.4	15
Fluoride	ND		ND		mg/L				NC	15
Sulfate	8.4		8.42		mg/L				0.2	15

TestAmerica Denver

# QC Sample Results

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

## Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-184833/93

Matrix: Water

Analysis Batch: 184833

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.10	mg/L			07/29/13 14:28	1

Lab Sample ID: LCS 280-184833/94

Matrix: Water

Analysis Batch: 184833

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	5.00	4.90		mg/L		98	90 - 110

Lab Sample ID: LCSD 280-184833/95

Matrix: Water

Analysis Batch: 184833

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	5.00	4.96		mg/L		99	90 - 110	1	10

Lab Sample ID: MRL 280-184833/52 MRL

Matrix: Water

Analysis Batch: 184833

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.100	0.126		mg/L		126	50 - 150

Lab Sample ID: 280-44835-B-7 MS

Matrix: Water

Analysis Batch: 184833

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	ND		4.00	4.05		mg/L		100	90 - 110

Lab Sample ID: 280-44835-B-7 MSD

Matrix: Water

Analysis Batch: 184833

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	ND		4.00	4.10		mg/L		101	90 - 110	1	10

## Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-185883/6

Matrix: Water

Analysis Batch: 185883

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	mg/L			08/05/13 11:08	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	mg/L			08/05/13 11:08	1
Carbonate Alkalinity as CaCO3	ND		5.0	mg/L			08/05/13 11:08	1
Hydroxide Alkalinity	ND		5.0	mg/L			08/05/13 11:08	1

TestAmerica Denver

# QC Sample Results

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

## Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 280-185883/4

Matrix: Water

Analysis Batch: 185883

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	200	192		mg/L		96	90 - 110

Lab Sample ID: LCSD 280-185883/5

Matrix: Water

Analysis Batch: 185883

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Alkalinity	200	211		mg/L		106	90 - 110	10	10

Lab Sample ID: 280-44789-B-1 DU

Matrix: Water

Analysis Batch: 185883

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	190		195		mg/L		2	10
Bicarbonate Alkalinity as CaCO3	190		195		mg/L		2	
Carbonate Alkalinity as CaCO3	ND		ND		mg/L		NC	
Hydroxide Alkalinity	ND		ND		mg/L		NC	

## Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 280-185227/5

Matrix: Water

Analysis Batch: 185227

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		2.0	umhos/cm			07/31/13 11:55	1

Lab Sample ID: LCS 280-185227/3

Matrix: Water

Analysis Batch: 185227

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	1410	1410		umhos/cm		100	90 - 110

Lab Sample ID: LCSD 280-185227/4

Matrix: Water

Analysis Batch: 185227

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Specific Conductance	1410	1410		umhos/cm		100	90 - 110	0	10

Lab Sample ID: 280-44830-C-1 DU

Matrix: Water

Analysis Batch: 185227

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	870		865		umhos/cm		0.7	10

TestAmerica Denver

# QC Sample Results

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

## Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 280-185047/1

Matrix: Water

Analysis Batch: 185047

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	mg/L			07/30/13 14:17	1

Lab Sample ID: LCS 280-185047/2

Matrix: Water

Analysis Batch: 185047

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	496	478		mg/L		96	86 - 110

Lab Sample ID: LCSD 280-185047/3

Matrix: Water

Analysis Batch: 185047

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Dissolved Solids	496	473		mg/L		95	86 - 110	1	20

Lab Sample ID: 280-44811-A-2 DU

Matrix: Water

Analysis Batch: 185047

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	150		163		mg/L		6	10

## Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 280-184599/4

Matrix: Water

Analysis Batch: 184599

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.010		SU		100	99 - 101

Lab Sample ID: LCSD 280-184599/5

Matrix: Water

Analysis Batch: 184599

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
pH	7.00	7.000		SU		100	99 - 101	0	5

Lab Sample ID: 280-44804-C-1 DU

Matrix: Water

Analysis Batch: 184599

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	8.56		8.570		SU		0.1	5

TestAmerica Denver

# Lab Chronicle

Client: Colorado Oil&Gas Conservation Commision  
Project/Site: Adels Water Well #200383515

TestAmerica Job ID: 280-44808-1

**Client Sample ID: Adels WW**

**Date Collected: 07/25/13 10:10**

**Date Received: 07/26/13 09:00**

**Lab Sample ID: 280-44808-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	185521	08/02/13 12:22	LWT	TAL DEN
Total/NA	Analysis	8015B		1	5 mL	5 mL	184816	07/29/13 20:12	TEM	TAL DEN
Total/NA	Analysis	RSK-175		1	18 mL	18 mL	185162	07/31/13 09:47	BMG	TAL DEN
Total/NA	Prep	3510C			1022.2 mL	1000 uL	184630	07/26/13 19:15	RJM	TAL DEN
Total/NA	Analysis	8015B		1			185160	08/01/13 08:26	MRB	TAL DEN
Dissolved	Filtration	FILTRATION			250 mL	250 mL	184634	07/26/13 18:54	JAM	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	184687	07/30/13 07:30	JAM	TAL DEN
Dissolved	Analysis	6010B		1			185154	07/30/13 15:32	HEB	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	184858	07/30/13 12:00	CRR	TAL DEN
Total/NA	Analysis	6010B		1			185155	07/30/13 22:38	HEB	TAL DEN
Total/NA	Analysis	SM 4500 H+ B		1			184599	07/26/13 14:34	SMG	TAL DEN
Total/NA	Analysis	300.0		1			184763	07/26/13 18:48	EMK	TAL DEN
Total/NA	Analysis	300.0		10			184763	07/27/13 01:24	EMK	TAL DEN
Total/NA	Analysis	300.0		20			184763	07/27/13 01:40	EMK	TAL DEN
Total/NA	Analysis	300.0		1			184764	07/26/13 18:48	EMK	TAL DEN
Total/NA	Analysis	300.0		10			184764	07/27/13 01:24	EMK	TAL DEN
Total/NA	Analysis	353.2		10			184833	07/29/13 15:14	SJS	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	185047	07/30/13 14:17	SMG	TAL DEN
Total/NA	Analysis	SM 2510B		1			185227	07/31/13 11:55	SMG	TAL DEN
Total/NA	Analysis	SM 2320B		1			185883	08/05/13 12:39	MPS	TAL DEN

**Client Sample ID: Trip Blank**

**Date Collected: 07/23/13 00:00**

**Date Received: 07/26/13 09:00**

**Lab Sample ID: 280-44808-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	184927	07/30/13 14:41	DPI	TAL DEN

## Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

## Login Sample Receipt Checklist

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-44808-1

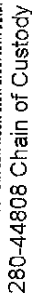
**Login Number: 44808**

**List Source: TestAmerica Denver**

**List Number: 1**

**Creator: Roman, Alex F**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



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**TestAmerica Laboratories, Inc.**

[illegible]